



RESPONSE TO RESTRICTION REQUIREMENT AND ELECTION OF SPECIES

PRELIMINARY AMENDMENT

U.S. Appln. No.: 10/518,405

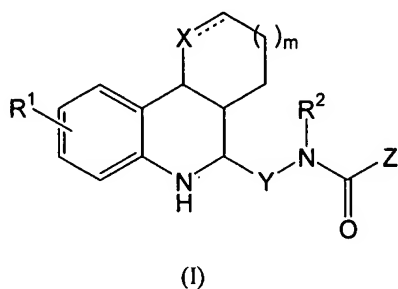
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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (original): A tetrahydroquinoline derivative represented by the following formula (I) or pharmacologically acceptable salts thereof:



wherein R¹ represents a nitro group or a cyano group;

X represents CH or O, provided that when X is CH, the dashed line represents a double bond;

m represents 0 or 1;

Y represents an alkylene group having 1 - 5 carbon atoms which may be substituted by a substituent selected from the group consisting of an alkyl group having 1 - 5 carbon atoms and a cycloalkyl group having 3 - 7 carbon atoms;

R² represents a hydrogen atom, an alkyl group having 1 - 5 carbon atoms, a cycloalkyl group having 3 - 7 carbon atoms or an aralkyl group having 7 - 9 carbon atoms;

Z represents -B-O-Q

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[wherein B represents an alkylene group having 1 - 5 carbon atoms which may be substituted by a substituent selected from the group consisting of an alkyl group having 1 - 5 carbon atoms and a cycloalkyl group having 3 - 7 carbon atoms; Q is a hydrogen atom, an alkyl group having 1 - 5 carbon atoms or a cycloalkyl group having 3 - 7 carbon atoms which may be substituted by a substituent selected from the group consisting of a halogen atom, a hydroxyl group, a cyano group and an alkoxy group having 1 - 5 carbon atoms, or an aryl group, a heteroaryl group or an aralkyl group having 7 - 9 carbon atoms which may have a substituent R³,

R³ represents an alkyl group having 1 - 5 carbon atoms which may be substituted by a fluorine atom, a halogen atom, an aryl group, a heteroaryl group, a nitro group, a cyano group, -A-R⁴ {wherein A represents -CO-, -CO₂-, -COS-, -CONR⁵-, -O-, -OCO-, -OSO₂-, -S-, SCO-, -SO-, -SO₂-, -NR⁵-, -NR⁵CO-, -NR⁵SO₂-, -NR⁵CONH-, NR⁵CSNH- or -NR⁵COO- (wherein R⁵ represents a hydrogen atom, an alkyl group having 1 - 5 carbon atoms, a cycloalkyl group having 3 - 7 carbon atoms or an aralkyl group having 7 - 9 carbon atoms),

R⁴ is a hydrogen atom, an alkyl group having 1 - 5 carbon atoms which may be substituted by a fluorine atom, a cycloalkyl group having 3 - 7 carbon atoms, a halogen atom, or an aryl group or a heteroaryl group which may be substituted by R⁶ (wherein R⁶ represents an alkyl group having 1 - 5 carbon atoms, an alkoxy group having 1 - 5 carbon atoms or a halogen atom), provided that when A is NR⁵- or -CONR⁵-, R⁴ and R⁵ may, together with the nitrogen atom to which they are bonded, form pyrrolidine or piperidine}}, or -A'-(CH₂)_n-R^{4'} {wherein A' represents a single bond, -CO-, -CO₂-, -COS-, -CONR^{5'}-, -O-, -OCO-, -OSO₂-, -S-, SCO-, -SO-, -SO₂-, -NR^{5'}-, -NR^{5'}CO-, -NR^{5'}SO₂-, -NR^{5'}CONH-, NR^{5'}CSNH- or -NR^{5'}COO- (wherein R^{5'}

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represents a hydrogen atom, an alkyl group having 1 - 5 carbon atoms, a cycloalkyl group having 3 - 7 carbon atoms or an aralkyl group having 7 - 9 carbon atoms), n represents an integer of 1 or 2, R⁴ⁱ represents a hydrogen atom, an alkyl group having 1 - 5 carbon atoms which may be substituted by a fluorine atom, a cycloalkyl group having 3 - 7 carbon atoms, a halogen atom, a hydroxyl group, a cyano group, an alkoxy group having 1 - 5 carbon atoms, an alkylacyloxy group having 2 - 5 carbon atoms, an alkoxycarbonyl group having 2 - 5 carbon atoms, an aryl group or a heteroaryl group which may be substituted by R⁶ⁱ (wherein R⁶ⁱ represents an alkyl group having 1 - 5 carbon atoms, an alkoxy group having 1 - 5 carbon atoms or a halogen atom), or -NR⁷ⁱR⁸ⁱ (wherein R⁷ⁱ and R⁸ⁱ each independently have the same meaning as the aforementioned R⁵ⁱ, provided that R⁷ⁱ and R⁸ⁱ may, together with the nitrogen atom to which they are bonded, form pyrrolidine or piperidine), provided that when A' is -NR⁵ⁱ- or -CONR⁵ⁱ-, R⁴ⁱ and R⁵ⁱ may, together with the -N-(CH₂)_n- to which they are bonded, form pyrrolidine or piperidine}], or alternatively Z represents -(CH₂)_r-W

[wherein r represents an integer of 0 - 2, W represents

a phenyl group having substituent R⁹ at p-position, a naphthyl group which may have substituent R¹⁰ or a heteroaryl group which may be substituted by 1 - 3 independent R¹¹'s (wherein R⁹, R¹⁰ and R¹¹ independently have the same meaning as the aforementioned R³)].

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2. (original): The tetrahydroquinoline derivative according to claim 1, where Y is -CH(CH₃)-CH₂- or -C(CH₃)₂-CH₂-, X is CH, m is 0, R² is a hydrogen atom and Z is -CH₂-O-Q (wherein Q represents an alkyl group having 1 - 5 carbon atoms) or pharmacologically acceptable salts thereof.

3. (original): The tetrahydroquinoline derivative according to claim 1, where Y is -CH(CH₃)-CH₂- or -C(CH₃)₂-CH₂-, m is 0, R² is a hydrogen atom and Z is -W [wherein W is a heteroaryl group which may be substituted by 1 - 3 independent R¹¹'s or a phenyl group having substituent R⁹ at p-position {wherein R¹¹ and R⁹ independently represent a halogen atom, an alkyl group having 1 - 5 carbon atoms which may be substituted by a fluorine atom, a nitro group, a cyano group, -A-R⁴ (wherein A is -CO-, -CO₂-, -O-, -NHCO- or -NHCONH-, and R⁴ is a hydrogen atom or an alkyl group having 1 - 5 carbon atoms which may be substituted by a fluorine atom) or -A'-(CH₂)_n-R⁴ (wherein A' is -CO-, -CO₂-, -O-, -NHCO- or -NHCONH-, R⁴ is a hydrogen atom, an alkyl group having 1 - 5 carbon atoms which may be substituted by a fluorine atom, a hydroxyl group, a halogen atom or an alkoxy group having 1 - 5 carbon atoms, and n is an integer of 1 or 2)}}] or pharmacologically acceptable salts thereof.

4. (original): The tetrahydroquinoline derivative according to claim 3, where Z is a phenyl group having substituent R⁹ at p-position or a heteroaryl group having substituent R¹¹ {wherein R⁹ and R¹¹ independently represent a halogen atom, -O-R⁴ or -NHCO-R⁴ (wherein R⁴

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represents a hydrogen atom or an alkyl group having 1 - 5 carbon atoms which may be substituted by a fluorine atom)) or pharmacologically acceptable salts thereof.

5. (original): The tetrahydroquinoline derivative according to claim 3, where Z is a phenyl group having substituent R⁹ at p-position or a heteroaryl group having substituent R¹¹ {wherein R⁹ and R¹¹ represent -NHCO-R⁴ (wherein R⁴ represents a hydrogen atom or an alkyl group having 1 - 5 carbon atoms which may be substituted by a fluorine atom))} or pharmacologically acceptable salts thereof.

6. (currently amended): ~~A pharmaceutical comprising the~~ The tetrahydroquinoline derivative or pharmacologically acceptable salts thereof according to any one of claims 1 to 5 as an active ingredient and a pharmaceutically acceptable carrier or excipient.

7. - 10. (canceled).

11. (original): A method of preventing or treating wasting disease or osteoporosis, which comprises administering to a mammal in need of such prevention or treatment, the tetrahydroquinoline derivative or pharmacologically acceptable salts thereof according to any one of claims 1 to 5 in an amount effective to prevent or treat those diseases.

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12. (original): A method of preventing or treating a disease selected from the group consisting of male hypogonadism, male sexual dysfunction, abnormal sex differentiation, male delayed puberty, cancer in female genital organ, breast cancer, mastopathy, endometriosis and female sexual dysfunction, which comprises administering to a mammal in need of such prevention or treatment, the tetrahydroquinoline derivative or pharmacologically acceptable salts thereof according to any one of claims 1 to 5 in an amount effective to prevent or treat those diseases.

13. (original): A method of preventing or treating hematopoietic dysfunction or diseases related thereto, which comprises administering to a mammal in need of such prevention or treatment, the tetrahydroquinoline derivative or pharmacologically acceptable salts thereof according to any one of claims 1 to 5 in an amount effective to prevent or treat those diseases.